

Construction Selector

- Fire Ratings
- Acoustical Performance
- Product/System Index
- Specification Standards

for U.S.G. assemblies

**partitions
and walls**

**demountable
partitions**

**ceilings
and floors**

**structural
fireproofing**

This Construction Selector summarizes the many effective systems that can be constructed with United States Gypsum quality-tested building products. Complete technical information, organized for efficiency of use, is presented according to the end result desired by the architect, engineer or designer. Tested fire-resistance and acoustical performance for various assemblies are presented for initial comparison and selection of systems. This folder also serves as an index to the various systems and product folders in this series providing more complete data.

U.S.G.—over 80 years of serving building construction

Since the Company's founding in 1902, United States Gypsum has been a leader in the building industry. The Company offers a wide variety of quality products and performance-engineered systems to meet specialized requirements for modern building design. Strategically located plants produce and/or stock these building materials. Manufacture of these products to carefully controlled standards insures uniform quality. Evidence of this is the preference for U.S.G.'s products in the marketplace.

The U.S.G. Research Center, largest and most advanced in the industry, continually develops new products and high-performance systems. They are designed to provide improved function and utility while reducing construction time and cost. All are released only after thorough testing and field trial.

U.S.G. employs technical service and sales representatives to help design professionals gain maximum performance from materials and systems by advising on selection, proper detailing and specification. They may be reached through the nearest U.S.G. Sales office listed on page 24.

contents/U.S.G. technical information

The rapidly expanding technology of building makes it difficult for today's designer to remain abreast of all new developments in materials and construction systems. This technical literature program has a format best suited for architect's use—organized by function and end result—to save time in locating technical information and improve results. It is arranged for quick comparison of functional properties and separated to isolate concise data on each major U.S.G. construction system and product.

This Construction Selector is the first element and key reference index to the program. It summarizes fire-rated construction and acoustical performance data of system variations for quick comparison and selection. Cross-references give the System Folders having complete description, installation details and specifications. Product Catalogs provide technical data on components and accessories used in U.S.G. construction systems.

The table right gives the sequence of other folders comprising the complete series. Section identification is shown for folders located in Sweet's 1983 General Building File; those marked "O" appear in other Sweet's files. The numeral before each division title indicates the UCI Uniform System division classification. Copies of all folders listed are available through U.S.G. sales offices or by mail (in Sweet's, see Literature Directory following this Selector).

The System Folders and Building Product Catalogs are arranged in numerical sequence, at right. The first numeral in the title number is the appropriate division number (two digits for two-digit division numbers) so that folders are easily filed. Other appropriate folders are included with their respective numbers. All folders are new 1983 editions, except SA-1510 GLOBE STRUT Metal Framing which was new in 1982. If the folders in your U.S.G. binder are more than one year old, contact your U.S.G. sales office for a current set of replacement literature.

Folder description

Sweet's Sec. No.

Div. 5/Grating, Steel Framing

SA-506	GRIP STRUT* Gratings	O
SA-510	Steel Framing Systems	5.3

Div. 7/Insulation

SA-705	Building & Acoustical Insulation	7.14
SA-707	THERMAFIBER* Fire Safety Systems	7.14
SA-710	FOAMULAR* Extruded Polystyrene Insulation	7.14

Div. 8/Curtain Walls, Doors & Frames

SA-815	CASTLEGATE* Insulated Steel Doors	O
SA-805	Exterior Curtain Walls	8.14

Div. 9/Acoustical Treatment

SA-905	Sound Control Ceilings	9.1
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Div. 9/Lath, Plaster

SA-912	Steel-Framed Veneer Plaster Partitions/Ceilings	9.5
SA-913	Wood-Framed Veneer Finish Partitions/Ceilings	O
SA-915	Steel-Framed Gypsum Lath Partitions	9.5
SA-917	Plasters, Bases & Accessories	9.5

Div. 9/Gypsum Drywall

SA-922	Cavity Shaft Wall Partitions	9.5
SA-923	Steel-Framed Gypsum Drywall Partitions/Ceilings	9.5
SA-924	Wood-Framed Gypsum Drywall Partitions/Ceilings	9.5
SA-925	Area Separation Walls	9.5
SA-927	Gypsum Panels & Accessories	9.5

Div. 9/Prefinished Panels

SA-928	TEXTONE* Vinyl-Faced Gypsum Panels	9.12
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Div. 9/Paints

SA-933	Texture & Paint Products	9.5
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Div. 10/Specialty Partitions

SA-1020	ULTRAWALL* Movable	10.1
SA-1070	ACCURATE Toilet Partitions	10.7
SA-1080	ACCURATE Laminated Toilet Partitions	10.7

Div. 15/Mechanical

SA-1510	GLOBE STRUT* Metal Framing	
SA-1515	THERMAFIBER* Mechanical Insulation	O

Div. 16/Electrical

SA-1610	GLOBETRAY* Cable Trays	
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*Reg. U.S. Pat. & Tm. Off.

Index/products and systems

product or system folder reference

A

Accessories,
structural & trim SA-917, SA-927
Acoustical insulation SA-705, SA-707,
SA-1515
Acoustical sealant SA-927
Acoustical tile, panels, space units .. SA-905
Adhesives, drywall SA-927
Aluminum foil-backed
boards SA-917, SA-927
Aluminum trim SA-1020
Area separation walls SA-925
ASTM Specs page 23, SA-100

B

Back-blocking system SA-924
Basecoat plaster SA-917
Block filler SA-933
Boiler insulation SA-1515
Brick veneer curtain walls SA-805
Building insulation SA-705, SA-710

C

Cable tray systems SA-1610
Caged beam construction .. SA-912, SA-923
Catwalk grating SA-506
Cavity shaft walls SA-922
Cavity wall insulation SA-710
Ceiling board, accessories .. SA-905, SA-927
Ceiling grid systems SA-905, SA-927
Ceiling heat components SA-917
Ceiling texture finishes SA-933
Channel framing SA-1510
Channels, furring & lathing .. SA-917, SA-927
Channels, resilient SA-917, SA-927
Chase walls SA-912, SA-915,
SA-922, SA-923, SA-924
Coatings, masonry SA-933
Column fireproofing SA-707, SA-923
Compartments,
toilet & shower SA-1070, SA-1080
Concrete fasteners SA-927
Concrete finishing
compound SA-917, SA-927
Concrete inserts SA-1510
Control joints SA-917, SA-927
Corner, casing beads SA-917, SA-927
Curtain wall insulation SA-707
Curtain walls SA-805

D

Demountable partitions SA-1020
Door frames SA-815, SA-1020
Doors, steel, fire-rated SA-815
Drywall ceilings SA-923, SA-924
Drywall fireproofing SA-923
Drywall furring systems SA-710, SA-805,
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Drywall partitions,
laminated SA-922, SA-923, SA-924
Drywall partitions, steel framed SA-922,
SA-923, SA-925, SA-1020
Drywall partitions,
wood-framed SA-924, SA-925

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Exterior curtain walls SA-805
Exterior texture finish SA-933
Exterior walls and ceilings .. SA-510, SA-710,
SA-805, SA-905, SA-924

product or system folder reference

F

Federal Specs page 23, SA-100
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Fireproofing, mineral felt SA-707
Fire-rated doors SA-815
Fire safety systems SA-707
Flame-resistant blankets SA-705
Floating angle construction . SA-913, SA-924
Flooring, open steel SA-505, SA-506
Flush doors SA-815
Foam insulation SA-710
Foil-back gypsum panels,
lath SA-917, SA-927
Foundation insulation SA-710
Frames, door SA-815, SA-1020
Framing, light-gauge steel SA-510
Foil-back insulation SA-705, SA-707,
SA-1515

G

Gauging plasters SA-917
Glazed doors SA-815
Grating, reticulated metal SA-506
Gypsum coreboard SA-927
Gypsum lath ceilings SA-912, SA-913
Gypsum lath partitions SA-912,
SA-915, SA-922
Gypsum liner panels SA-927
Gypsum panels SA-927, SA-928
Gypsum plaster bases SA-917

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Insulated steel doors SA-815
Insulating blankets, mats SA-705,
SA-707, SA-1515
Insulating furring SA-710, SA-912,
SA-915, SA-923
Insulating gypsum panels,
lath SA-917, SA-927
Insulation, fire-containment SA-707
Insulation, mechanical SA-1515
Insulation, extruded polystyrene SA-710

J

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Joists, load-bearing steel SA-510

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Light fixture protection SA-905

M

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Metal lath & accessories SA-917
Metal stud partitions SA-912, SA-915,
SA-922, SA-923, SA-925, SA-1020
Metal studs SA-510, SA-917, SA-927
Metal toilet components SA-1070
Metal cable tray systems SA-1610
Metal trim SA-917, SA-927, SA-1020
Mineral fiber insulation SA-705, SA-707,
SA-1515
Mirrored ceiling panels SA-905
Mouldings, drywall SA-927, SA-928
Movable partitions SA-1020

References listed are *principal source* of information in U.S.G. Architectural Technical Literature series. Repetition or additional data may occur in other folders.

product or system folder reference

P

Paint products SA-933
Partitions, toilet SA-1070, SA-1080
Party walls SA-510, SA-912, SA-923,
SA-924, SA-1020
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S

Safing insulation SA-707
Screens, toilet
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Screws, gypsum board SA-917, SA-927
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Separation walls SA-925
Shaft wall partitions SA-922
Sheathing, extruded polystyrene SA-710
Sheathing, gypsum SA-927
Shower compartments SA-1070, SA-1080
Sidelights, door SA-815
Sound attenuation
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Space units, acoustical SA-905
Stair treads SA-506
Steel doors, frames SA-815
Steel framing, load-bearing SA-510
Steel studs SA-510, SA-917, SA-927
Stucco SA-805, SA-917

T

Tape, reinforcing SA-917, SA-927
Texture finishes SA-933
Thermal entry doors SA-815
Toilet partitions,
accessories SA-1070, SA-1080
Trim accessories SA-917, SA-927

V

Varnishes SA-933
Veneer finishes SA-917
Veneer plaster systems SA-805, SA-912,
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Vent shaft construction SA-922
Vinyl-faced gypsum panels SA-928
Vinyl trim SA-917, SA-927, SA-928

W

Wallboard & accessories SA-927
Wallcovering, vinyl SA-928
Wall panels, prefinished SA-928
Wood-frame partitions, ceilings SA-913,
SA-924, SA-925

How to use this selector

description of sections

This folder is divided into six sections—A to F—covering the categories indicated below. Within each section are listed brief analyses of major variations of each system, as documented by fire or sound tests, federal specifications or ASTM designations. They are arranged sequentially according to fire ratings—the criterion that most often governs selection.

These analyses are organized to locate the criteria desired at a glance. In Section A, covering fixed and demountable partitions, all information appears under five column headings:

fire-rated construction		acoustical performance		
detail & physical data	description & test no.	STC	description & test no.	folder reference

In section B—ceiling systems—headings are revised to show STC and IIC sound ratings. In sections C, D and E—structural fireproofing, exterior walls and wall furring—certain of these columns are not applicable and are omitted.

The analyses applicable to each system, as listed in the first five sections here, are repeated in the individual folder covering that system, indicated by number in the "Folder Reference" column. Full information, details and specifications on the selected constructions also are available in the folders. See contents, page 2, for folder locations.

a partitions—pages 5 to 10—include mechanically fastened and laminated assemblies, steel and wood-framed, load bearing and non-load bearing, fixed and demountable—in gypsum base and veneer finishes, gypsum drywall, and conventional lath and plaster.

b ceilings—pages 11 to 17—include suspended, furred and direct-attachment types, employing drywall, veneer finishes, conventional plaster and mineral fiber tile or panel surfaces with companion floor or roof construction.

c structural fireproofing—pages 18 and 19—shows basic methods of protecting columns and beams with gypsum base and veneer finishes, mineral fireproofing, and gypsum drywall.

d exterior walls—page 20—includes load-bearing wood and steel stud systems and exterior curtain wall assemblies.

e exterior wall furring—page 21—compares methods of furring exterior walls, including veneer and conventional plaster and drywall furring systems.

f product catalogs—listed and indexed on page 22—present complete data on components and accessories used in U.S.G. drywall and plaster construction systems. Other subjects: building and mechanical insulation, texture and paint products, prefinished wall panels, sound control ceiling products, cable trays, gratings, metal channel framing, insulated steel doors and frames, metal and laminated plastic toilet compartments and screens.

Federal specification and ASTM designation qualifications of U.S.G. products are listed on page 23.

abbreviations




In the test analyses following, the abbreviation "est" indicates *estimated*; the abbreviation N/A indicates *not applicable* or *not available*. Other abbreviations are classified by columns where they appear:

description and comments

acoust	acoustical	insul	insulating or insulation
alum	aluminum	int	interior
appl	applied	lamin	laminated
att	attached	lbr	lumber
atten	attenuation	lightwt	lightweight
betw	between	lim	limiting
bd	board	met	metal
blks	blankets	min	mineral or minimum
cem	cement	mov	movable
chan	channel	nom	nominal
clg	ceiling	noncomb	noncombustible
col	column	o.c.	on center
com	common	opp	opposite
conc	concrete	oz	ounce
contin	continuous	partn	partition
conv	conventional	perim	perimeter
corrug	corrugated	plywd	plywood
cr	cold rolled	prot	protected or protection
ctd	coated	qtr	quarter
dbl	double	recom	recommended
ea	each	reg	regular
exp	exposed	resil	resilient
extendg	extending	run	runner(s)
fin	finish or finished	sep	separate
fireprfg	fireproofing	separ	separated
fixt	fixture	stag	staggered
flr	floor	stl	steel
freq	frequency	subflr	subfloor
ft	foot or feet	susp	suspended or suspension
furr	furring		
ga	gauge	syst	system
galv	galvanized	thickn	thickness
hex	hexagonal	unfin	unfinished
horiz	horizontally	vert	vertically
hr	hour	wd	wood
ht	height	wt	weight (lb./sq. ft.)

Plaster mixes show plaster content by weight in lb., aggregates by volume in cu. ft.

In details, color background designates materials indicated below:

	Sound-deadening material; column or beam fireproofing.		Furring channels.
	Resilient channels.		

test no.

noncomb	noncombustible	ASTM	Amer. Soc. Testing Materials
Des	Design	USG	United States Gypsum
GA	Gypsum Association		

The recognized laboratories which performed the tests are noted by abbreviation as follows:

Fire	Sound
UL—Underwriters Laboratories Inc.	TL—Riverbank Acoustical Laboratories
OSU—Ohio State University	G & H—Geiger & Hamme
U of C—University of California	CK—Cedar Knolls Acoust. Laboratories
WHI—Warnock Hersey International	BBN—Bolt, Beranek and Newman
CEG—Consulting Engineers Group	KSO—Kenward S. Oliphant
	KAL—Kodaras Acoustical Laboratories
	SA—Shiner & Assoc.

sound rating

STC	sound transmission class per ASTM test procedures	IIC	impact insulation class per ASTM test procedures
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clg. STC range	sound transmission class per AMA 1-II test procedure
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sound tests

Sound tests are conducted under ideal laboratory conditions per ASTM procedures. Comparable field performance depends on building design and careful attention to detailing and workmanship.

test certification

U.S.G. will provide test certification for published fire, sound and structural data covering systems designed and constructed according to its published specifications. Tests are conducted on U.S.G. products assembled to meet performance requirements of established test procedures specified by various agencies. System performance following any substitution of materials or compromise in assembly design cannot be certified and may result in failure under critical conditions.

selector guide to sound-rated partitions⁽¹⁾

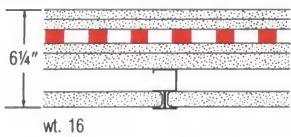
STC range	55-60	50-54	45-49	40-44	35-39
drywall assemblies	2, 3, 10, 15, 22, 23, 40, 50	8, 9, 10, 14, 20, 22, 23, 39, 40, 41, 51, 53, 54	10, 12, 13, 17, 19, 24, 42, 43, 48, 50, 51, 55, 56, 59, 60	41, 43, 47, 48, 59, 60	13, 44, 52
plaster assemblies	2	26, 27, 29, 35, 38	27, 28, 30, 31, 32, 33, 35	34	

(1) Assemblies identified by numbers in outside margin, pp. 5 to 10.

fire-rated construction		acoustical performance		folder reference
detail & physical data	description & test no.	STC	description & test no.	




4-hour rated partitions

drywall steel-framed assembly—non-load bearing

 <p>6 1/4" wt. 16</p>	Cavity Shaft Wall Gypsum Drywall—2 layers 5/8" SHEETROCK brand FIRECODE "C" gypsum panels face side—1" USG shaft wall liner panels set betw USG steel C-H studs 24" o.c.—1" liner panels & 5/8" gypsum panel core screw att to studs—horiz USG met fur chan 24" o.c.—face side panels screw att to fur chan—panels appl vert with joints stag—joints fin—est. fire rating based on U of C 5-24-74—rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface	N/A		SA-922	1
	Steel Stud—4 layers 1/2" SHEETROCK brand FIRECODE "C" gypsum panels ea side—1 1/2" USG studs 24" o.c.—base layers appl vert—face layer appl horiz—panels screw att with joints stag & fin—perimeter caulked—rating based on assembly with or without sound atten blankets—rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface—UL Des U435	58	Based on assembly with 1 1/2" sound atten blankets in cavity—SA-820518	SA-912 SA-923	2

3-hour rated partitions

drywall steel-framed assemblies—non-load bearing

 <p>4" wt. 14</p>	Cavity Area Separation Wall—5/8" SHEETROCK brand W/R FIRECODE "C" gypsum panels—1" USG gypsum liner panels set betw USG steel C-H Studs 24" o.c.—RC-1 chan 24" o.c. screw att to side opp liner panels—1 1/2" THERMAFIBER sound atten blkts—single layer panels one side appl vert & screw att—2 layers opp side screw att to chan—base layer appl horiz—face layer appl vert—joints fin—perim caulked—est. fire rating based on U of C 2-16-72	57	BBN-730622	SA-925	3
	Cavity Shaft Wall Gypsum Drywall—3 layers 5/8" SHEETROCK brand FIRECODE "C" gypsum panels one side—1" USG shaft wall liner panels set betw USG steel C-H studs 24" o.c.—panels screw att to side opp liner panels with joints stag—base & face layers appl vert—mid layer appl horiz—joints fin—est. fire rating based on U of C 2-16-72—rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface	N/A		SA-922	4
 <p>4 3/8" wt. 15</p>	Steel Stud—3 layers 1/2" SHEETROCK brand FIRECODE "C" gypsum panels ea side—1 1/2" USG studs 24" o.c.—base layers appl vert—face layer appl horiz—panels screw-att with joints stag & fin—perimeter caulked—rating based on assembly with or without sound atten blankets—rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface—UL Des U435	N/A		SA-912 SA-923	5
	Steel Stud—3 layers 5/8" SHEETROCK brand FIRECODE "C" ea side—fireproofed steel truss—2 1/2" USG studs 24" o.c. in 2 rows spaced 8" apart—5/8" gypsum panel gussets spanning chase att to stud at qtr points—panels appl vert & screw-att—joints stag & fin—UL Des U805	N/A		SA-923	6
 <p>6" wt. 9</p>	Solid Area Separation Wall—two 1" gypsum liner panels set betw USG steel H-studs 24" o.c.—2" THERMAFIBER sound atten blkts ea side—blkts appl horiz with joints stag and staple-att to liner panels—WHI-495-0393/0394	N/A		SA-925	7

fire-rated construction

detail & physical data

description & test no.

acoustical performance

STC

description & test no.

folder

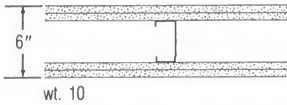
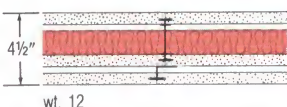
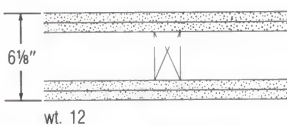
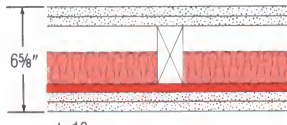
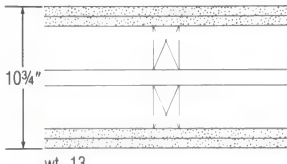
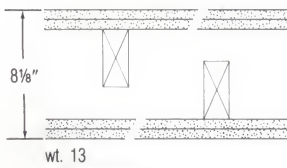
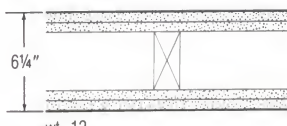
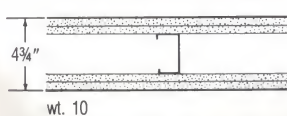
reference

2-hour rated partitions

drywall steel-framed assemblies—non-load bearing

<p>4" wt. 10</p>	<p>Cavity Area Separation Wall—$\frac{1}{2}$" SHEETROCK brand W/R FIRECODE "C" gypsum panels—1" USG gypsum liner panels set betw USG steel C-H studs 24" o.c.—RC-1 chan 24" o.c. screw att to side opp liner panels—$1\frac{1}{2}$" THERMAFIBER sound atten blkts—single layer panels ea side appl vert & screw att—joints stag on opp sides & fin—perim caulked—est. fire rating based on U of C 6-23-75</p>	50	BBN-750411	SA-925	8
<p>4" wt. 10</p>	<p>Cavity Shaft Wall Gypsum Drywall—2 layers $\frac{1}{2}$" SHEETROCK brand FIRECODE "C" gypsum panels one side—1" USG shaft wall liner panels set betw USG steel C-H studs 24" o.c.—RC-1 chan spaced 24" o.c.—$1\frac{1}{2}$" THERMAFIBER sound atten blkts—panels & RC-1 chan screw att to side opp liner panels—base layer appl horiz—face layer appl vert—joints fin—est. fire rating based on U of C 2-8-72 and U of C 6-23-75—rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface</p>	51	BBN-750412	SA-922	9
<p>10 1/4" wt. 16</p>	<p>Solid Area Separation Wall—$\frac{5}{8}$" SHEETROCK brand FIRECODE "C" gypsum panels—two 1" gypsum liner panels set betw USG steel H-studs 24" o.c.—2 x 3 wd studs 16" o.c. ea side on 2 x 3 plates 1" from liner panels—gypsum panels att with 1 1/4" Type W screws 12" o.c.—joints stag & fin—perim caulked—est. fire rating based on T-4481-OSU and T-1339-OSU</p>	45 57 54	<p>BBN-730104 Based on 2" sound atten. blankets in both cavities—BBN-730102 Based on 2" sound atten. blankets in one cavity—BBN-730103</p>	SA-925	10
<p>3 1/2" wt. 9</p>	<p>Cavity Shaft Wall Gypsum Drywall—$\frac{1}{2}$" SHEETROCK brand FIRECODE "C" gypsum panels—1" USG shaft wall liner panels set betw USG steel C-H studs 24" o.c.—single layer panels ea side appl vert & screw att—joints stag on opp sides & fin—rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface—U of C 6-23-75</p>	N/A		SA-922	11
<p>3 1/2" wt. 9</p>	<p>Cavity Area Separation Wall—$\frac{1}{2}$" SHEETROCK brand W/R FIRECODE "C" gypsum panels—1" USG gypsum liner panels set betw USG steel C-H studs 24" o.c.—single layer panels ea side appl vert & screw att—joints stag on opp side & fin—perim caulked—U of C 6-23-75</p>	47	<p>Based on 1" sound atten. blankets in cavity—BBN-750704</p>	SA-925	12
<p>3 1/2" wt. 9</p>	<p>Cavity Shaft Wall Gypsum Drywall—2 layers $\frac{1}{2}$" SHEETROCK brand FIRECODE "C" gypsum panels one side—1" USG shaft wall liner panels set betw USG steel C-H studs 24" o.c.—panels appl vert to side opp liner panels & screw att—joints fin—rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface—U of C 4-2-75</p>	39 47	<p>USG-750302 Based on 1" sound atten. blankets in cavity—BBN-750706</p>	SA-922	13
<p>4 1/2" 5 5/8" wt. 10</p>	<p>Steel Stud—2 layers $\frac{1}{2}$" SHEETROCK brand FIRECODE "C" gypsum panels ea side—2 1/2" or 3 5/8" USG studs 24" o.c.—1", 1 1/2" or 2" THERMAFIBER sound atten blkts stapled—panels appl vert & joints stag—base layer screw att—face layer strip lamin or screw att—joints fin—perimeter caulked—rating based on assembly with or without atten blankets—UL Des U412</p>	55 54‡ 53	<p>Based on 3 5/8" studs and 1 1/2" blankets—SA-800421 Based on lamin. face layer USG-114-FT-G&H Based on 2 1/2" studs, screw-att. face layer and 1 1/2" blankets—CK-654-40</p>	SA-923	14
<p>wt. 11 (T) thickn 11" wt. 13 (T) thickn 12"</p>	<p>Steel Stud Chase Wall—2 layers $\frac{1}{2}$" SHEETROCK brand FIRECODE "C" gypsum panels ea side—1 5/8" USG studs 24" o.c. in 2 rows spaced 5 3/4" apart—1/2" gypsum panel gussets spanning chase att to studs at qtr points—panels appl vert & screw att—1 1/2" THERMAFIBER sound atten blkts one side—joints stag & fin—perimeter caulked—est. fire rating based on UL Des U412</p>	55‡	USG-134-FT-G&H	SA-923	15
<p>wt. 12 (T) thickn 5", 6 1/8"</p>	<p>Steel Stud Chase Wall—2 layers $\frac{5}{8}$" SHEETROCK brand FIRECODE gypsum panels ea side—1 5/8" USG studs 24" o.c. in 2 rows spaced 6 1/4" apart—5/8" gypsum panel gussets or stl run braces spanning chase screw-att to studs—panels appl vert & screw att—joints stag & fin—UL Des U420</p>	N/A		SA-923	16
<p>wt. 9 (T) thickn 3 5/8"</p>	<p>Steel Stud—2 layers $\frac{5}{8}$" SHEETROCK brand FIRECODE gypsum panels plain or vinyl faced vert appl ea side—2 1/2" or 3 5/8" USG studs 24" o.c.—based layer screw att—face layer lamin or screw att—joints fin or unfin—perimeter caulked—UL Des U411—rating also applies with plain panels horiz appl—WHI-0236-0237</p>	48	<p>Based on 3 5/8" studs and 5/8" FIRECODE "C" panels—BBN-770408</p>	SA-923	17
<p>wt. 9 (T) thickn 3 5/8"</p>	<p>Steel Stud—2 layers $\frac{1}{2}$" SHEETROCK brand FIRECODE "C" gypsum panels—1 5/8" USG studs 24" o.c.—2 layers ea side vert appl & screw att—joints fin—U of C 6-15-65</p>	N/A		SA-923	18

‡Based on 11-freq.

fire-rated construction		acoustical performance		folder reference
detail & physical data	description & test no.	STC	description & test no.	
drywall steel-framed assembly—load bearing				
	Load-bearing Steel Stud—2 layers 5/8" SHEETROCK brand FIRECODE gypsum panels ea side—35SJ20 USG studs 24" o.c.—panels appl vert & att with Type S-12 screws 12" o.c.—joints stag & fin—load bearing up to 80% allowable stud axial load—UL Des U425	48	Based on 2" sound atten. blankets in cavity—USG-811006	SA-510 19
drywall demountable assembly—non-load bearing				
	Mov ULTRAWALL Partn—concealed "H" studs 24" o.c.—1 1/2" THERMAFIBER sound atten blkts—3/4" x 24" bevel edge panels one side—double layer opp side with 3/4" Z-runners betw layers—joints unfin—perim caulked—painted—UL Des U416	50	TL-70-198	SA-1020 20
drywall wood-framed assemblies—load bearing				
	Wd Stud—2 layers 5/8" SHEETROCK brand FIRECODE or W/R FIRECODE "C" gypsum panels ea side—2 x 4 16" o.c.—base layer att with 6d nails 6" o.c.—face layer lamin or nailed to base—joints fin—UL Des U301	N/A		SA-924 21
	Wd Stud—2 layers 5/8" SHEETROCK brand FIRECODE "C" gypsum panels ea side—2x4 16" o.c.—2" THERMAFIBER sound atten blkts—RC-1 chan one side spaced 24" o.c.—resil side screw att—opp side nail att—both base layers appl vert and face layers appl horiz—base layers perim caulked—joints fin—T-4799-OSU	58 52	USG—810219 Based on same assembly (non-fire rated) without blankets—USG-810218	SA-924 22
	Wd Stud—2 layers 5/8" SHEETROCK brand FIRECODE "C" gypsum panels—2 rows 2x4 16" o.c. on sep plates 1" apart—base layer att with 6d ctd nails 16" o.c.—face layer att with 7d ctd nails 7" o.c.—perim caulked—joints fin—est. fire rating based on UL Des U301	51 56	TL-69-214 Based on 3 1/2" thick blankets in one cavity—USG-710120	SA-924 23
	Stag Wd Stud—2 layers 5/8" SHEETROCK brand FIRECODE "C" gypsum panels—2x4 16" o.c. on 2x6 com plate—base layer att with 6d ctd nails 6" o.c.—face layer att with 8d ctd nails 8" o.c.—perim caulked—joints fin—est. fire rating based on UL Des U301	47	TL-69-211	SA-924 24
plastered wood-framed assembly—load bearing				
	Wd Stud—2 layers 5/8" IMPERIAL FIRECODE "C" gypsum base & 1/16" veneer finish both sides—2x4 16" o.c.—base layer 6d nails 6" o.c.—face layer 8d nails 8" o.c.—joints taped—UL Des U301	N/A		SA-913 25
plastered steel-framed assemblies—non-load bearing				
	Steel Stud—2 layers 1/2" IMPERIAL FIRECODE "C" gypsum base & veneer finish—2 1/2" USG studs 24" o.c.—both layers base appl vert, joints stag & screw att—1/16" veneer finish—perimeter caulked—UL Des U424	53	Based on assembly with 1" sound atten. blankets—CK-654-66	SA-912 26

fire-rated construction

detail & physical data

description & test no.

acoustical performance

STC

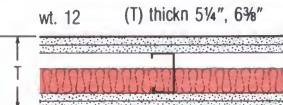
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folder

reference

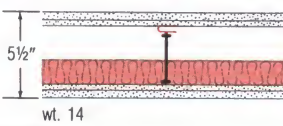

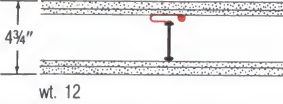
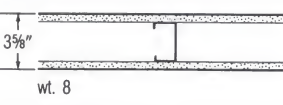


2-hour rated partitions

plastered steel-framed assemblies—non-load bearing (continued)


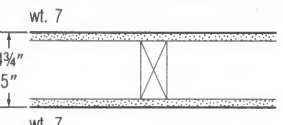
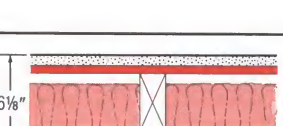

 <p>wt. 12 (T) thickn 5 1/4", 6 3/8"</p>	Steel Stud—2 layers 5/8" IMPERIAL FIRECODE gypsum base & veneer finish—2 1/2" or 3 3/8" USG studs 24" o.c.—base layer screw att—face layer lamin or screw att—joints taped—1/16" veneer finish—UL Des U411	47 51	Based on 2 1/2" studs—TL-75-73 Based on 2 1/2" studs and 1 1/2" sound atten. blankets in cavity—TL-75-70	SA-912	27
	Steel Stud—2 layers 1/2" IMPERIAL FIRECODE "C" gypsum base & veneer finish—2 1/2" or 3 3/8" USG studs 24" o.c.—2" THERMAFIBER sound atten blkts stapled one side—base appl vert & joints stag—base layer screw att—face layer strip lamin or screw att—joints taped—1/16" veneer finish—perimeter caulked—rating based on assembly with or without sound atten blankets—UL Des U412	49	Field test—based on 2 1/2" studs and face layer strip laminated—KSO-1090072-a	SA-912	28

1-hour rated partitions

plastered steel-framed assemblies—non-load bearing

 <p>5 1/2" wt. 14</p>	Steel Stud—Resil Gypsum Lath & Plaster—3/4" TRUSSTEEL studs 16" o.c.—1" THERMAFIBER sound atten blkts—TR-1 clips one side & TL-1 clips opp side—3/8" ROCKLATH Base—1/2" 100:2-100:2 gypsum sand plaster—perimeter caulked	52	CK-664-38	SA-915	29
 <p>4 1/4" wt. 15</p>	Steel Stud—Gypsum Lath & Plaster—2 1/2" USG studs 16" o.c.—3/8" ROCKLATH Base—MS-1 clips both sides—1" THERMAFIBER sound atten blkts—1/2" 100:2 1/2 gypsum sand plaster—perim caulked	49	CK-664-18	SA-915	30
 <p>4 3/4" wt. 12</p>	Steel Stud—Resil Gypsum Lath & Plaster—2 1/2" TRUSSTEEL studs 16" o.c.—TR-1 clips one side & TL-1 clips opp side—3/8" ROCKLATH Base—1/2" 100:2 gypsum sand plaster—perim caulked	46	TL-69-14	SA-915	31
 <p>3 5/8" wt. 8</p>	Steel Stud—1/2" IMPERIAL FIRECODE "C" gypsum base & veneer finish—2 1/2" USG studs—base screw att—joints stag & taped—1/16" veneer finish—perimeter caulked—stud spacing at 16" recommended—GA-WP-1240	45	Based on 3 3/8" studs 24" o.c. with 1" sound atten. blankets in cavity—CK-664-1	SA-912	32
 <p>4 1/4" wt. 14</p>	Steel Stud—Gypsum Lath & Plaster—2 1/2" USG studs 16" o.c.—3/8" ROCKLATH Base—MS-1 clips both sides—1/2" 100:2 1/2 gypsum sand plaster—perim caulked	45	CK-664-17	SA-915	33
 <p>4 1/2" wt. 13</p>	Steel Stud—Gypsum Lath & Plaster—2 1/2" TRUSSTEEL studs 16" o.c.—3/8" ROCKLATH Base—1/2" 100:2-100:2 gypsum sand plaster	41‡	TL-58-7	SA-915	34

plastered wood-framed assemblies—load bearing

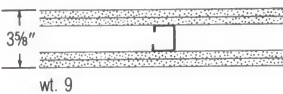
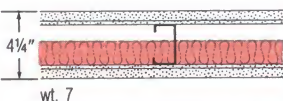
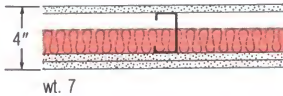





 <p>5 1/2" wt. 8</p>	Wd Stud—Resil 5/8" IMPERIAL FIRECODE "C" gypsum base & veneer finish—2 x 4 16" o.c.—3" THERMAFIBER sound atten blkts—RC-1 chan one side spaced 24" o.c.—based att with 1" Type S screws—opp side att direct with 1 1/4" Type W screws—1/16" veneer finish both sides—perimeter caulked—UL Des U311	50‡ 49	USG-111-FT-G&H Based on 1/2" gypsum base—CK-664-4	SA-913	35
 <p>4 3/4" 5" wt. 7</p>	Wd Stud—1/2" IMPERIAL FIRECODE "C" gypsum base att direct & veneer finish—2 x 4 16" o.c.—base nailed 7" o.c. 6d nails—1/16" veneer finish—joints taped—U of C 10-27-64	N/A		SA-913	36
 <p>4 3/4" wt. 7</p>	Wd Stud—5/8" IMPERIAL FIRECODE "C" gypsum base & veneer finish—2 x 4 16" o.c.—base nailed 7" o.c.—1 1/8" cem ctd nails—1/16" veneer finish both sides—joints taped—UL Des U305	N/A		SA-913	37
 <p>6 1/8" wt. 11</p>	Wd Stud—Resil 5/8" IMPERIAL gypsum base & veneer finish—2 x 4 16" o.c.—2 layer base one side screw att & lamin—single layer opp side screw att to RC-1 chan spaced 24" o.c.—3" THERMAFIBER sound atten blkts—1/16" veneer finish both sides—perimeter caulked—est. fire rating based on UL Des U311	53	CK-654-38	SA-913	38

‡Based on 11-freq.

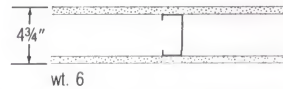
fire-rated construction		acoustical performance		folder reference
detail & physical data	description & test no.	STC	description & test no.	

1-hour rated partitions



drywall steel-framed assemblies—non-load bearing

	Steel Stud—2 layers 1/2" SHEETROCK brand gypsum panels ea side—1 1/2" USG studs 24" o.c.—panels appl vert & screw att—joints stag & fin—perimeter caulked—U of C 9-21-64	53	Based on FIRECODE "C" panels, 2 1/2" studs & 1 1/2" sound atten. blankets—CK-654-40	SA-923 39
	Steel Stud—5/8" SHEETROCK brand FIRECODE gypsum panels—2 1/2" USG studs 24" o.c.—1 1/2" THERMAFIBER sound atten blkts—2 layer—base layer 1/4" SHEETROCK brand panels screw att—5/8" face layer screw att—joints fin—perimeter caulked—est. fire rating based on T-1174-OSU	55 53	CK-684-14 Based on 1/2" thick panels—CK-684-13	SA-923 40
	Steel Stud—1/2" SHEETROCK brand FIRECODE "C" gypsum panels—2 1/2" USG studs 24" o.c.—single layer panels one side appl vert & screw att—1 1/2" THERMAFIBER sound atten blkts one side—2 layers opp side—panels appl vert & screw att—joints stag & fin—perimeter caulked—est. fire rating based on T-3362-OSU	50 41	SA-800504 Based on same construction without blankets—TL-69-148	SA-923 41
	Steel Stud—1/2" SHEETROCK brand FIRECODE "C" gypsum panels—2 1/2" USG studs 24" o.c.—single layer panels ea side appl vert & screw att—1 1/2" THERMAFIBER sound atten blkts one side—joints fin—perimeter caulked—T-3362-OSU	45 48	TL-69-42 Based on 3 3/8" studs & 2" blankets—TL-65-158	SA-923 42
	Steel Stud—5/8" SHEETROCK brand FIRECODE gypsum panels—3 3/8" USG studs 24" o.c.—single layer panels vert or horiz appl & screw att—joints stag & fin—perimeter caulked—T-1174-OSU—based on panels horiz appl—GA-WP-1200	42‡ 48	USG-17-FT-G&H Based on 3" sound atten. blankets in cavity and FIRECODE "C" panels—SA-800415	SA-923 43
	Steel Stud—5/8" SHEETROCK brand FIRECODE gypsum panels—1 1/2" USG studs 24" o.c.—single layer panels vert appl & screw att 12" o.c.—joints fin—perimeter caulked—U of C 7-31-62	38‡	TL-64-29	SA-923 44
	Cavity Shaft Wall Gypsum Drywall—5/8" SHEETROCK brand FIRECODE "C" gypsum panels one side—1" USG shaft wall liner panels set betw USG steel C-H studs 24" o.c.—panels appl to side opp liner panels & screw att—joints fin—fire rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface—U of C 4-3-75	N/A		SA-922 45
	Steel Stud Chase Wall—5/8" SHEETROCK brand FIRECODE gypsum panels ea side—1 1/2" USG studs 24" o.c. in 2 rows spaced 6 1/4" apart—5/8" gypsum panel gussets or steel run braces spanning chase screw att to studs—panels applied vert & screw att—joints stag & fin—UL Des U420	N/A		SA-923 46

drywall steel-framed assembly—load bearing

	Load-bearing Steel Stud—5/8" SHEETROCK brand FIRECODE "C" gypsum panels—35SJ20 USG studs 24" o.c.—panels appl vert & att with 1" Type S-12 screws 12" o.c.—joints stag & fin—load bearing up to 100% allowable stud axial load—UL Des U425	40 41	USG-810519 Based on 2" sound atten. blankets in cavity—USG-810518	SA-510 47
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drywall demountable assemblies—non-load bearing

	Mov ULTRAWALL Partn—concealed "H" studs 24" or 30" o.c.—3/4" x 24" or 30" bevel edge ULTRAWALL gypsum panels—joints unfin—perim gaskets—based on 24" panels—U of C 8-18-67—based on 30" panels—U of C 7-23-69	42 47	Based on 24" panels—BBN-701008 Based on 24" panels and 1" sound atten. blankets in cavity—BBN-701216	SA-1020 48
	Mov ULTRAWALL Partn—concealed "H" studs 24" o.c.—std flr run—painted std clg run with int tabs—3/4" x 24" bevel edge ULTRAWALL gypsum panels—joints unfin—WHI-120/121—based on alum clg run—WHI-495-0225/0226	N/A		SA-1020 49

‡Based on 11-freq.

fire-rated construction

detail & physical data

description & test no.

acoustical performance

STC

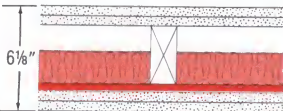
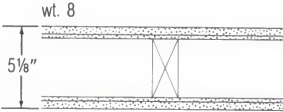
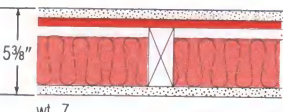
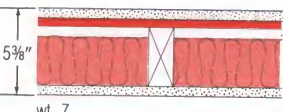
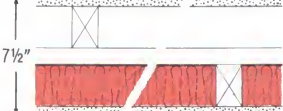
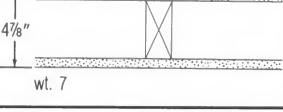
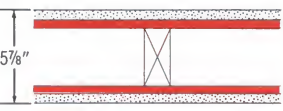
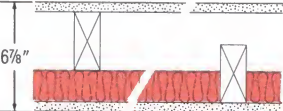
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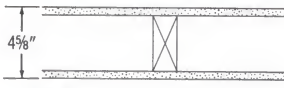
1-hour rated partitions

drywall wood-framed assemblies—load bearing

 <p>6 1/8"</p> <p>wt. 12</p>	<p>Wd Stud—2 layers 1/2" SHEETROCK brand FIRECODE "C" gypsum panels ea side—2 x 4 16" o.c.—3" THERMAFIBER sound atten blkts—RC-1 chan one side spaced 24" o.c.—resil. side screw att—opp side nail att—both base layers appl vert and face layers appl horiz—base layers perim caulked—joints fin—est. fire rating based on UL Des U311</p>	59	<p>TL-67-239 Based on same construction without blankets—TL-67-212</p>	SA-924	50
		49			
 <p>5 1/8"</p> <p>wt. 8</p>	<p>Wd Stud—1/2" SHEETROCK brand FIRECODE "C" gypsum panels—2 x 4 16" o.c.—2 layer—base layer 1/4" SHEETROCK brand gypsum panels appl vert with 4d ctd nails—1/2" panel face layer strip lamin—joints stag & fin—perimeter caulked—est. fire rating based on UL Des U305</p>	45	<p>TL-69-52 Based on 3/8" lamin. face layers & 1 1/2" sound atten. blankets—USG-221-ST-G&H</p>	SA-924	51
		53			
 <p>5 3/8"</p> <p>wt. 7</p>	<p>Wd Stud—2 layers 3/8" SHEETROCK brand gypsum panels lamin & nailed—2 x 4 16" o.c.—joints fin—T-118-48-OSU</p>	38‡	<p>TL-57-14</p>	SA-924	52
 <p>5 3/8"</p> <p>wt. 7</p>	<p>Wd Stud—Resil 3/8" SHEETROCK brand FIRECODE "C" gypsum panels—2 x 4 16" or 24" o.c.—3" THERMAFIBER sound atten blkts—RC-1 chan one side spaced 24" o.c.—panels att with 1" Type S screws—opp side direct att with 1 1/4" Type W screws—joints fin—perimeter caulked—UL Des U311</p>	50	<p>BBN-760903</p>	SA-924	53
 <p>7 1/2"</p> <p>wt. 8</p>	<p>Stag Wd Stud—3/8" SHEETROCK brand FIRECODE gypsum panels—2 x 3 16" o.c.—2 x 3 plates 1" apart—panels nailed 7" o.c.—3" THERMAFIBER sound atten blkts one side—joints fin—perim caulked—est. fire rating based on UL Des U305</p>	54	<p>Based on screws or nails 7" o.c.—TL-77-149</p>	SA-924	54
 <p>4 7/8"</p> <p>wt. 7</p>	<p>Wd Stud—3/8" SHEETROCK brand FIRECODE or W/R FIRECODE "C" gypsum panels—2 x 4 16" or 24" o.c.—panels nailed 7" o.c.—1 1/8" cem ctd nails—joints fin—perim caulked—UL Des U305 based on 16" stud spacing—UL Des U314 based on 24" stud spacing</p>	46	<p>Based on 24" stud spacing and screws 12" o.c.; includes 3" sound atten. blankets—BBN-700725 Based on studs and screws 16" o.c.—USG-30-FT-G&H</p>	SA-924	55
		34‡			
 <p>5 1/8"</p> <p>wt. 7</p>	<p>Wd Stud—Resil 3/8" SHEETROCK brand FIRECODE gypsum panels—2 x 4 16" o.c.—RC-1 chan both sides spaced horiz 24" o.c. att with 6d nails—panels att with 1" Type S screws—joints fin—perimeter caulked—T-1396-OSU</p>	45‡	<p>TL-60-52</p>	SA-924	56
 <p>6 1/8"</p> <p>wt. 8</p>	<p>Stag Wd Stud—3/8" SHEETROCK brand FIRECODE "C" gypsum panels—2 x 4 16" o.c. on 2 x 6 com plate—panels att with 6d ctd nails 7" o.c.—2" THERMAFIBER sound atten blkts one side—perim caulked—joints fin—est. fire rating based on UL Des U305</p>	45	<p>TL-69-213</p>	SA-924	57



45-min. rated partitions

drywall wood-framed assembly—load bearing

 <p>4 3/8"</p> <p>wt. 6</p>	<p>Wd Stud—1/2" SHEETROCK brand FIRECODE "C" gypsum panels—2 x 4 16" o.c.—panels nailed 7" o.c.—1 1/8" cem ctd nails—joints fin—UL Des U317</p>	N/A		SA-924	58
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other partitions

drywall demountable assemblies—non-load bearing

 <p>3 3/8"</p> <p>wt. 8</p>	<p>Mov ULTRAWALL Partn—concealed "T" studs both sides 24" o.c.—3/4" x 24" bevel edge ULTRAWALL gypsum panels—1 1/2" THERMAFIBER sound atten blkts—joints stag—unfin & perim caulked—N/A</p>	48 40	<p>TL-70-251 Based on same construction without blankets—TL-70-252</p>	SA-1020	59
 <p>3 3/8"</p> <p>wt. 7</p>	<p>Mov ULTRAWALL Partn—concealed H/R-studs both sides 24" o.c.—3/4" x 24" bevel edge ULTRAWALL gypsum panels—1 1/2" THERMAFIBER sound atten blkts—joints unfin—perim gaskets—N/A</p>	46 40	<p>USG-740909 Based on same construction without blankets—USG-750206</p>	SA-1020	60

(For fire and sound test data on other partition assemblies, see U.S.G. Technical Bulletin: CS-6 Metal-Framed Metal Lath and Plaster Systems.)

‡Based on 11-freq.

clg. STC
range†physical data
construction detail

description & test no.

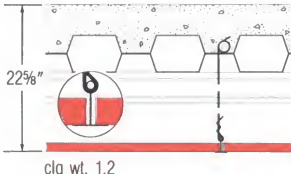
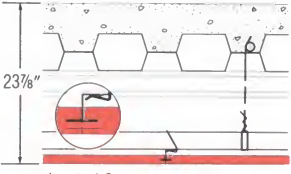
comments

folder
reference

acoustical and air distributing ceilings

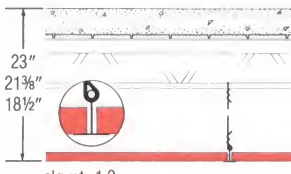
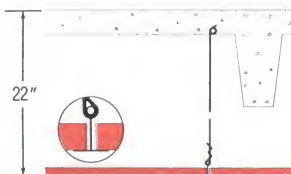
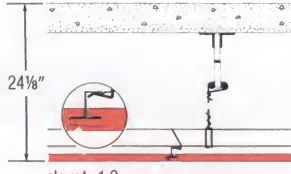
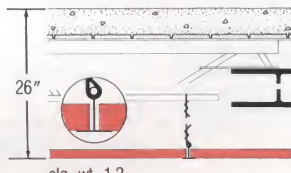
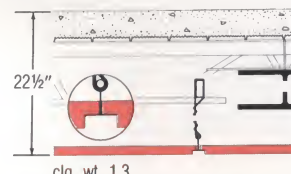
3-hour rated ceilings

mineral fiber surfaces

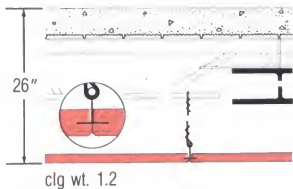
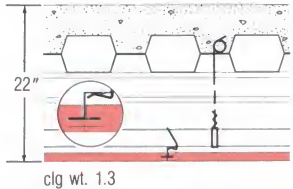
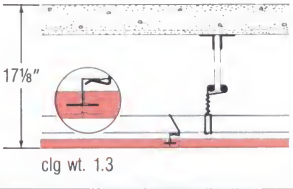
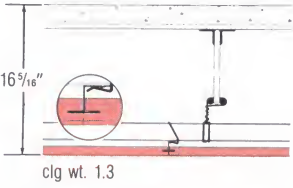
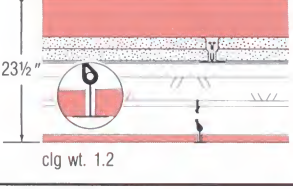
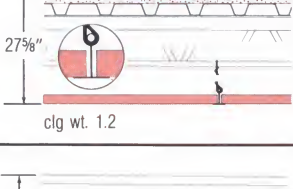
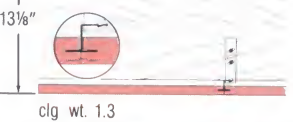
40 to 44		AURATONE FIRECODE 5/8" x 24" x 48" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1 1/4" THERMAFIBER min wool bd—2 1/2" conc on cellular stl flr—UL Des A207 (f)	Includes 4-hr. unrestrained beam. See Sound Control Ceilings Folder for STC values of various patterns	SA-905	1
45 to 49		AURATONE FIRECODE 3/4" x 12" x 12" acoust clg tile on Concealed Z-runner Syst—clg interrupted—light fixt prot by 1 1/4" THERMAFIBER min wool bd—2 1/2" conc on cellular stl flr—UL Des A009 (f)	Includes 4-hr. unrestrained beam. See Sound Control Ceilings Folder for STC values of various patterns	SA-905	2

2-hour rated ceilings

mineral fiber surfaces

40 to 44		AURATONE FIRECODE 5/8" x 24" x 48" or 24" x 24" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1 1/4" THERMAFIBER min wool bd—2 1/2" conc deck on riblath over bar joist—UL Des G211 (f)—UL Des G227 (f)—UL Des G251 (f)	UL Des G227 is Shadow Line System and includes 3-hr. unrestrained beam. UL Des G251 includes 2-hr. beam and only 5/8" x 24" x 48" panels. 5/8" AURATONE FIRECODE panels acceptable for light fixt. prot. on UL Des G211 & UL Des G227	SA-905	3
40 to 44		AURATONE FIRECODE 5/8" x 24" x 48" or 24" x 24" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 5/8" AURATONE FIRECODE panels or 1 1/4" THERMAFIBER min wool bd—2" prestressed conc units with 6" deep stems 48" o.c.—UL Des J202 (f)		SA-905	4
40 to 44		AURATONE FIRECODE 5/8" x 12" x 12" acoust clg tile on Concealed Z-runner Syst—clg interrupted—light fixt prot by 1 1/4" min wool bd—2 1/2" conc deck on riblath over bar joist—UL Des G019 (f)	See Sound Control Ceilings Folder for STC values of various patterns	SA-905	5
40 to 44		AURATONE FIRECODE 3/4" x 24" x 24" to 30" x 60" or 20" x 60" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 5/8" AURATONE FIRECODE panels or 1 1/4" THERMAFIBER min wool bd—2 1/2" conc deck on riblath over bar joist—UL Des G231 (f)	Panels 5/8" thick also qualify, except in 30" x 60" size. Includes 3-hr. unrestrained beam	SA-905	6
40 to 44		ACOUSTONE FIRECODE 3/4" x 24" x 24" min acoust panels on Exp Shadow Line Grid Syst—clg interrupted—light fixt prot by 5/8" AURATONE FIRECODE panels or 1 1/4" THERMAFIBER min wool bd—2 1/2" conc deck on riblath over bar joist—UL Des G228 (f)	Includes 2-hr. unrestrained beam	SA-905	7

†Per AMA 1-II test procedure.

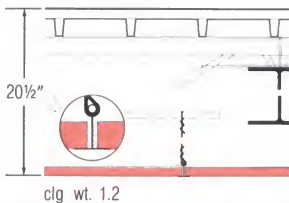
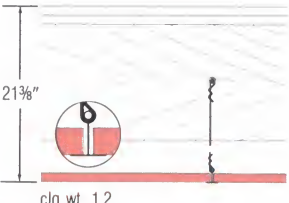
clg. STC range†	physical data construction detail	description & test no.	comments	folder reference
2-hour rated ceilings				
mineral fiber surfaces				
40 to 44		AURATONE FIRECODE $\frac{5}{8}$ " x 12" x 12" to 24" x 24" acoust tile on Concealed Accessible Grid Syst—clg interrupted—light fixt prot by $1\frac{1}{4}$ " THERMAFIBER min wool bd— $2\frac{1}{2}$ " conc deck on riblath over bar joist— UL Des G008 (f)	Includes 2-hr. unrestrained beam. See Sound Control Ceilings Folder for STC values of various patterns	SA-905 8
40 to 44		ACOUSTONE FIRECODE $\frac{3}{4}$ " x 12" x 12" min acoust tile on Concealed Z-runner Syst—clg interrupted—light fixt prot by $1\frac{1}{4}$ " THERMAFIBER min wool bd— $2\frac{1}{2}$ " conc deck on cellular stl flr— UL Des A010 (f)	Includes $1\frac{1}{2}$ -hr. unrestrained beam. Unrestrained assembly rating— $1\frac{1}{2}$ hr.	SA-905 9
40 to 44		ACOUSTONE FIRECODE $\frac{3}{4}$ " x 12" x 12" min acoust tile on Concealed Z-runner Syst— $2\frac{1}{2}$ " conc deck on riblath over bar joist— UL Des G018 (f)		SA-905 10
1 1/2-hour rated ceilings				
mineral fiber surfaces				
35 to 39		ACOUSTONE FIRECODE $\frac{3}{4}$ " x 12" x 12" min acoust tile on Concealed Z-runner Syst— $2\frac{1}{2}$ " conc deck on riblath over bar joist— UL Des G020 (f)		SA-905 11
40 to 44		AURATONE FIRECODE $\frac{5}{8}$ " x 24" x 48" acoust clg panels in direct-hung Susp Exp Grid Syst—clg interrupted—light fixt prot by $\frac{5}{8}$ " AURATONE FIRECODE panels—1" stl roof deck & $\frac{5}{8}$ " SHEETROCK FIRECODE gypsum panels & 1" min fiber insul over bar joist— UL Des P228 (f)		SA-905 12
40 to 44		AURATONE FIRECODE $\frac{5}{8}$ " x 24" x 48" acoust clg panels in direct-hung Susp Exp Grid Syst—clg interrupted—light fixt prot by $\frac{5}{8}$ " AURATONE FIRECODE panels—1" stl roof deck & $\frac{5}{8}$ " SHEETROCK FIRECODE gypsum panels & 1" min fiber insul over bar joist— UL Des P233 (f)	No max. on insul. thickness. Unrestrained assembly rating—1 hr.	SA-905 13
35 to 39		ACOUSTONE FIRECODE $\frac{3}{4}$ " x 12" x 12" min acoust tile on Concealed Z-runner Syst—1" nom wd sub & fin floor over wd joist 16" o.c.— UL Des L003 (f)		SA-905 14

†Per AMA 1-II test procedure.

clg. STC range†	physical data construction detail	description & test no.		comments	folder reference
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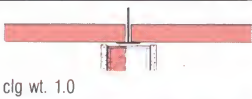

1-hour rated ceilings

mineral fiber surfaces

40 to 44		AURATONE FIRECODE 5/8" x 24" x 48" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1 1/4" THERMAFIBER min wool bd—1 1/2" stl roof deck & 1" noncomb insul over bar joist— UL Des P214 (f)		Includes 1-hr. unrestrained beam. See Sound Control Ceilings Folder for STC values of various patterns	SA-905 15
40 to 44		AURATONE FIRECODE 5/8" x 24" x 48" or 24" x 24" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 5/8" AURATONE FIRECODE panels or 1/4" THERMAFIBER min wool bd—1" nom wd sub & fin flr over 2 x 10 wd joist— UL Des L206 (f)		See Sound Control Ceilings Folder for STC values of various patterns	SA-905 16

noncombustible ceilings

mineral fiber surfaces

35 to 39		ACOUSTONE "F" Foil-Backed 3/4" x 12" x 24" or 12" x 36" min acoust tile on 1-Way Exp Grid Syst— ASTM E84 (f)		One-way exposed grid system for accessibility	SA-905 17
40 to 44		ACOUSTONE Foil-Backed Fissured or Glacier 3/4"x12"x12" min acoust tile on concealed 100% Accessible Direct-hung Susp Syst— ASTM E84 (f)		Basic direct-hung concealed accessible system	SA-905 18
35 to 39		ACOUSTONE "F" 3/4" x 12" x 12" or 12" x 24" min acous tile on Concealed Z-runner Syst— ASTM E84 (f)		Basic concealed spline acoustical tile system; STC estimated	SA-905 19
40 to 44		AURATONE 5/8" or 3/4" x 24" x 24" or 24" x 48" acoust clg panels in Susp Exposed Grid Syst— ASTM E84 (f)		Basic noncombustible lay-in panels; NRC varies with pattern	SA-905 20
44(1) 44(2)		AURATONE 5/8" x 24" x 48" acoust clg panels in Susp Exp Grid Syst—contin over partn—1 1/2" THERMAFIBER sound atten blkts over clg— ASTM E84 (f) — (1) USG-210-FT-G&H (s)—(2) USG-211-FT-G&H (s)		Test USG-211-FT includes double-layer blankets extending 4 ft. both sides of partition	SA-905 21


†Per AMA 1-II test procedure.

fire-rated construction		acoustical performance		folder reference
detail & physical data	description & test no.		STC IIC description & test no.	

gypsum drywall and plaster ceilings


3-hour rated ceilings

plastered assembly

16"		5/8" IMPERIAL FIRECODE "C" gypsum base & veneer finish ceiling—USG met fur chan—base att with 1" Type S screws 12" o.c.—joints exp or taped—1/16" veneer finish—2 1/2" conc on riblath over bar joist—furring channel spacing at 16" o.c.recom—includes 3-hr. unrestrained beam— UL Des G512	N/A	SA-912 22
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clg wt. 4

gypsum drywall surfaces

16"		5/8" SHEETROCK brand FIRECODE "C" gypsum panels—USG met fur chan 24" o.c.—panels att with 1" Type S screws 12" o.c.—joints exp or fin—2 1/2" conc on riblath over bar joist—includes 3-hr. unrestrained beam— UL Des G512	N/A	SA-923 23
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clg wt. 3

fire-rated construction

detail & physical data

description & test no.

acoustical performance

STC

IIC

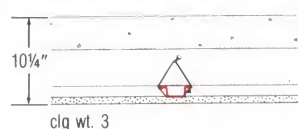
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folder

reference

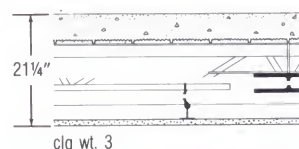
3-hour rated ceilings

gypsum drywall surfaces (continued)



5/8" SHEETROCK brand FIRECODE "C" gypsum panels—USG met fur chan 24" o.c.—panels att with 1" Type S screws—joints fin—prestressed 2 3/4" reg or 2 1/2" lightwt conc units with 6" deep stems 48" o.c.—**UL Des J502—UL Des J503—UL Des J504**

N/A

SA-923 **24**

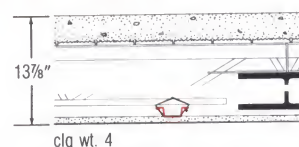
1/2" SHEETROCK brand FIRECODE "C" gypsum panels—USG susp grid with main run 4' o.c. and cross tees 2' o.c.—gypsum panels screw-att below grid—joints fin—3 1/4" conc on riblath over bar joist—rating also applies with 5/8" panels and 2 3/4" conc slab—includes 3-hr. unrestrained beam—**UL Des G529**

N/A

SA-923 **25**

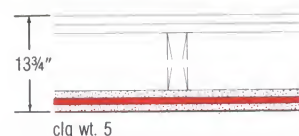
2-hour rated ceilings

plastered assemblies



1/2" IMPERIAL FIRECODE "C" gypsum base & veneer finish ceiling furred or susp—USG met fur chan—base att with screws 12" o.c.—joints taped—1/16" veneer finish—2 1/2" conc on riblath over bar joist—spacing of furring channel at 16" o.c. recommended—includes 2-hr. unrestrained beam—**UL Des G515**

N/A

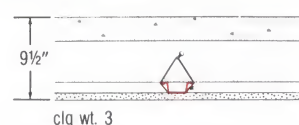
SA-912 **26**

Resil 2 layers 5/8" IMPERIAL FIRECODE "C" gypsum base & veneer finish ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—RC-1 chan screw att over base layer—face layer screw att to chan 12" o.c.—1/16" veneer finish—joints taped—**UL Des L511**

N/A

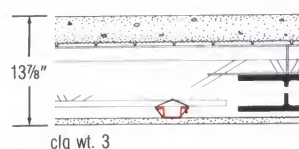
SA-913 **27**

gypsum drywall surfaces



5/8" SHEETROCK brand FIRECODE "C" gypsum panels—USG met fur chan 24" o.c.—panels att with 1" Type S screws—joints fin—2" prestressed reg or lightwt conc units with 6" deep stems 48" o.c.—**UL Des J502—UL Des J503**

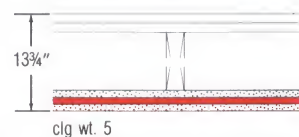
N/A

SA-923 **28**

1/2" SHEETROCK brand FIRECODE "C" gypsum panels—furred or susp—USG met fur chan 24" o.c.—panels att with 1" Type S screws 12" o.c.—joints exp or fin—2 1/2" conc on riblath or corrug stl deck over bar joist—includes 2-hr. unrestrained beam—**UL Des G515**

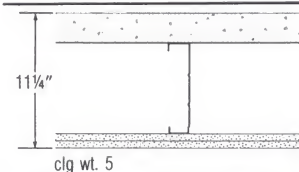
54

Ceiling STC rating based on furred interrupted clg. & 1 1/2" sound atten. blankets extend. 4 ft. beyond partn.—**USG-189-FT-G&H**

SA-923 **29**

Resil 2 layers 5/8" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—RC-1 chan spaced 24" o.c. screw att over base layer panels—face layer screw att to chan 12" o.c.—joints fin—**UL Des L511**

N/A

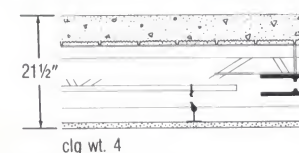
SA-924 **30**

5/8" SHEETROCK brand FIRECODE "C" gypsum panels—USG 75SJ18 steel joists 24" o.c.—2 1/2" conc flr over corrug steel deck—dbl layer gypsum panel ceiling—base panels att with 1" Type S-12 screws 12" o.c.—face panels att with 1 1/8" Type S-12 screws 12" o.c.—joints stag and fin—est. fire rating based on witnessed laboratory test

44

73

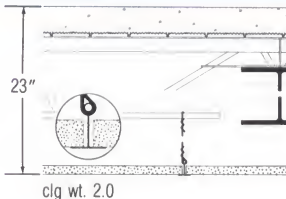
KAL-443533
Based on carpet & pad—**KAL-443680**
Based on RC-1 resil chan. 24" o.c.—**KAL-443534**

SA-510 **31**

1/2" SHEETROCK brand FIRECODE "C" gypsum panels—USG susp grid with main run 4' o.c. and cross tees 2' o.c.—gypsum panels screw-att below grid—joints fin—2 1/2" conc on riblath over bar joist—includes 3-hr. unrestrained beam—**UL Des G529**

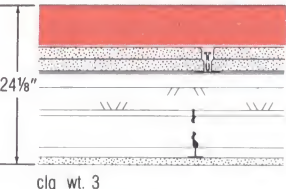
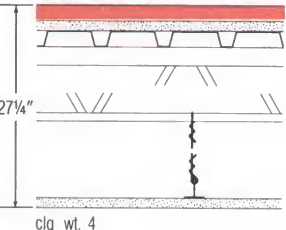
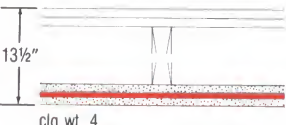
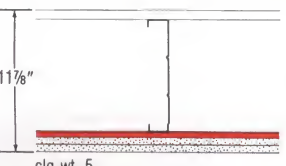
N/A

SA-923 **32**

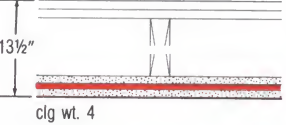
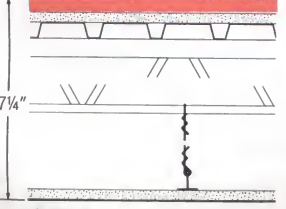
fire-rated construction		acoustical performance			folder reference
detail & physical data	description & test no.	STC	IIC	description & test no.	
 <p>23"</p> <p>clg wt. 2.0</p>	<p>FIRECODE 1/2" x 24" x 24" Gypsum Panels on Susp Exp Grid Syst—clg interrupted—light fixt prot by 3/8" AURATONE FIRECODE panels or 1 1/4" THERMAFIBER min wool bd—2 1/2" conc deck on riblath over bar joist—Includes 2-hr. unrestrained beam—UL Des G222—fire rating 1 1/2 hr. with 1/2" x 24" x 48" panels; includes 1 1/2-hr. unrestrained beam—UL Des G259</p>	N/A			SA-905 33

1 1/2-hour rated ceilings

gypsum drywall surfaces

 <p>24 1/8"</p> <p>clg wt. 3</p>	<p>5/8" SHEETROCK brand FIRECODE "C" gypsum panels—USG susp grid with main run 4' o.c. and cross tees 2' o.c.—gypsum panels screw-att below grid—joints fin—3 1/2" roof insul on 2" gypsum plank over bar joists—UL Des P506</p>	N/A			SA-923 34
 <p>27 1/4"</p> <p>clg wt. 4</p>	<p>5/8" SHEETROCK brand FIRECODE "C" gypsum panels—susp grid with main run 4' o.c. and cross tees 2' o.c.—gypsum panels screw-att below grid—joints stag and fin—min 1" roof insul and 5/8" gypsum bd on steel deck over bar joists—1-hr. rating based on assembly with 1/2" thick panels—UL Des P510</p>	N/A			SA-923 35
 <p>13 1/2"</p> <p>clg wt. 4</p>	<p>Resil 2 layers 1/2" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—1" nom wd sub & fin fir—2 x 10 wd joist 16" o.c.—RC-1 chan spaced 24" o.c. screw att over base layer panels—face layer screw att to chan 12" o.c.—joists fin—UL Des L510</p>	N/A			SA-924 36
 <p>11 7/8"</p> <p>clg wt. 5</p>	<p>Resil 5/8" SHEETROCK brand FIRECODE "C" gypsum panels—3/4" T&G plywd flr att to joists with Type S-12 screws 24" o.c.—USG 95SJ16 steel joists 24" o.c.—dbl layer gypsum panel clg att to RC-1 chan screw att to joists—base panels att with 1" Type S screws—face panels att with 1 1/2" Type S screws—joists fin—UL Des L527</p>	48 51		<p>USG-771101 Based on carpet & pad —SA-781110</p>	SA-510 37

plastered assemblies

 <p>13 1/2"</p> <p>clg wt. 4</p>	<p>Resil 2 layers 1/2" IMPERIAL FIRECODE "C" gypsum base & veneer finish ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—RC-1 chan 24" o.c. screw att over base layer—face layer screw att to chan 12" o.c.—1/16" veneer finish—joints taped—UL Des L510</p>	N/A			SA-913 38
 <p>27 1/4"</p> <p>clg wt. 4</p>	<p>5/8" IMPERIAL FIRECODE "C" gypsum base and veneer finish ceiling—susp grid with main run 4' o.c. and cross tees 2' o.c.—base screw-att below grid—joists stag and taped—min 1" roof insul and 5/8" gypsum bd on stl deck over bar joists—1-hr. rating based on assembly with 1/2" thick base—UL Des P510</p>	N/A			SA-912 39

fire-rated construction

detail & physical data

description & test no.

acoustical performance

STC

IIC

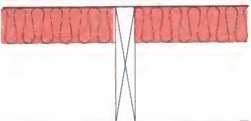
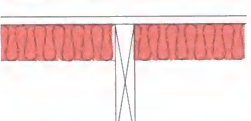
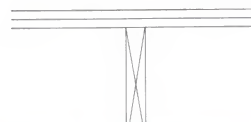
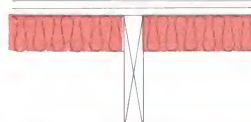


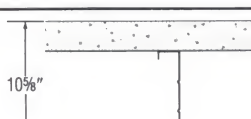
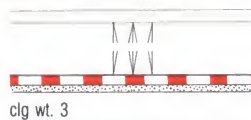
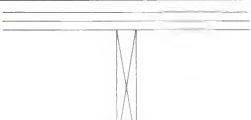
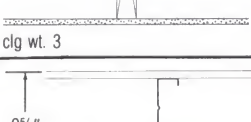
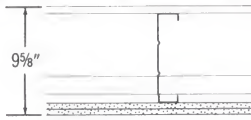

description & test no.

folder

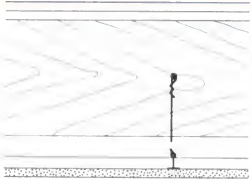
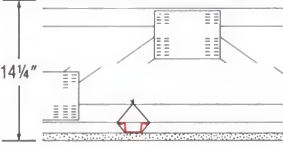
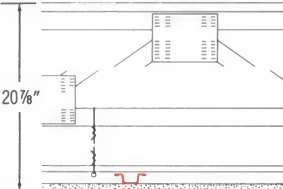
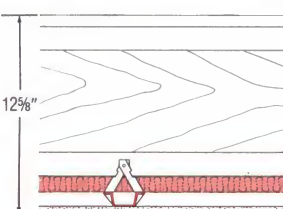
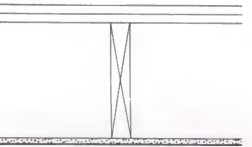

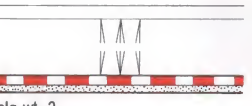
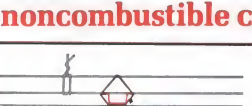
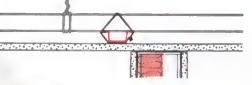
reference

1-hour rated ceilings

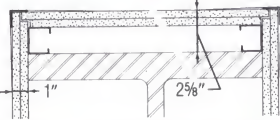
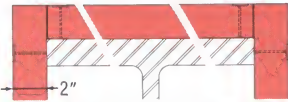
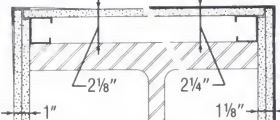
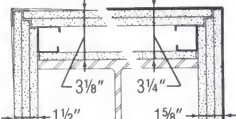
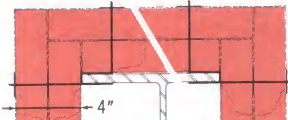
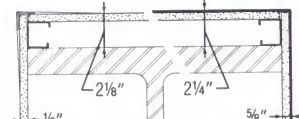
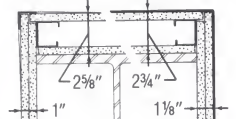
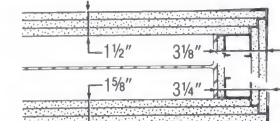
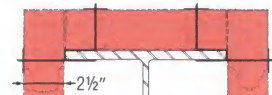
gypsum drywall surfaces

	5/8" SHEETROCK brand gypsum panel ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—3" THERMAFIBER sound atten bkts betw joists—panels att with 6d nails 6" o.c.—joints fin—est. fire rating based on UL Des L501	41	32	CK-6412-6 Based on 44-oz carpet & 40-oz pad atop flooring—CK-6412-5	SA-924	40
clg wt. 3		40	58			
	Resil 5/8" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—3" glass fiber batts betw joists—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—UL Des L516	N/A			SA-924	41
clg wt. 3						
	Resil 1/2" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—RC-1 chan spaced 24" o.c.—panels att with 1" Type S screws—joints fin—UL Des L514	N/A			SA-924	42
clg wt. 3						
	Resil SHEETROCK brand gypsum panel ceiling—1 1/4" nom wd sub & fin flr—44-oz carpet & 40-oz pad atop flr—2 x 10 wd joist 16" o.c.—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—est. fire rating based on UL Des L514	47	39	Based on 1/2" FIRECODE "C" panels—CK-6512-6 Based on 5/8" reg gypsum panels—CK-6412-10	SA-924	43
		47	39			
	Resil SHEETROCK brand gypsum panel ceiling—1 1/4" nom wd sub & fin flr—44-oz carpet & 40 oz pad atop flr—2 x 10 wd joist 16" o.c.—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—est. fire rating based on UL Des L514	47	67	Based on 1/2" FIRECODE "C" panels—CK-6512-7 Based on 5/8" reg gypsum panels—CK-6412-9	SA-924	44
		48	66			
	Resil SHEETROCK brand gypsum panel ceiling—1 1/4" nom wd sub & fin flr—44-oz carpet & 40 oz pad atop flr—2 x 10 wd joist 16" o.c.—3" THERMAFIBER sound atten bkts betw joists—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—est. fire rating based on UL Des L514	51	46	Based on 1/2" FIRECODE "C" panels—CK-6512-9 Based on 5/8" reg gypsum panels—CK-6412-3	SA-924	45
		50	46			
	Resil SHEETROCK brand gypsum panel ceiling—1 1/4" nom wd sub & fin flr—44-oz carpet & 40 oz pad atop flr—2 x 10 wd joist 16" o.c.—3" THERMAFIBER sound atten bkts betw joists—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—est. fire rating based on UL Des L514	52	71	Based on 1/2" FIRECODE "C" panels—CK-6512-8 Based on 5/8" reg gypsum panels—CK-6412-4	SA-924	46
		51	70			
clg wt. 3						
	5/8" SHEETROCK brand FIRECODE gypsum panel ceiling—Amer Plywood Assn 2-4-1 flr 4 x 10 wd joist 48" o.c.—USG met fur chan spaced 24" o.c.—panels att with 1" Type S screws—joints fin—UL Des L508	N/A			SA-924	47
clg wt. 3						
	5/8" SHEETROCK brand FIRECODE gypsum panel ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—panels att with 6d nails 6" o.c.—joints fin—UL Des L501	38	32	CK-6412-7 Based on 44-oz carpet & 40-oz pad atop flooring—CK-6412-8	SA-924	48
		39	56			
	1/2" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—panels att with 5d cem ctd nails 6" o.c.—joints fin—UL Des L512	N/A			SA-924	49
	1/2" SHEETROCK brand FIRECODE "C" gypsum panels—USG 725SJ18 steel joists 24" o.c.—dbl layer gypsum panel clg and 5/8" T&G plywd flr att to joists with Type S-12 screws 12" o.c.—dbl layer gypsum panels around beam—joints exp—includes 1-hr. unrestrained beam—UL Des L524	39		Based on 95SJ16 joists—USG-760105	SA-510	50
		43		Based on 95SJ16 joists and 3" sound atten. blankets—USG-760310	SA-923	
		56		Based on 95SJ16 joists and carpet & pad—USG-760106		
		60		Based on 95SJ16 joists and carpet & pad with 3" sound atten. bkts.—USG-760405		
9 5/8"						
clg wt. 3						
	5/8" SHEETROCK brand FIRECODE "C" gypsum panels—USG 75SJ18 steel joists 24" o.c.—2 1/2" conc flr on corrug steel deck—gypsum panel ceiling att to joists with 1" Type S-12 screws 12" o.c.—joints fin—est. fire rating based on witnessed laboratory test	45		Based on RC-1 resil chan 24" o.c.—KAL-443536 Based on carpet & pad—KAL-443535	SA-510	51
		70				
10 5/8"						
clg wt. 3						

*Insulation may affect fire rating; see SA-905.

fire-rated construction		acoustical performance			folder reference
detail & physical data	description & test no.	STC	IIC	description & test no.	
	1/2" or 5/8" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—USG susp grid with main run 4' o.c. and cross tees 2' o.c.—panels screw-att below grid—joints fin—UL Des L525	N/A			SA-924 52
clg wt. 3					
	5/8" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—2 x 12 wd truss of 2 x 4 lbr secured with steel truss plates—trusses 24" o.c.—3/4" nom plywd flr—USG met fur chan 24" o.c. wire-tied to trusses—panels att with 1" type S screws 12" o.c.—joints fin—fire rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface—UL Des L528	N/A			SA-924 53 SA-913
clg wt. 3					
	5/8" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—2 x 12 wd truss of 2 x 4 lbr secured with steel truss plates—trusses 24" o.c.—3/4" nom plywd flr—USG susp grid with main run 4' o.c. and cross tees 2' o.c.—panels att with 1" type S-12 screws 12" o.c.—joints fin—fire rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface—UL Des L529	N/A			SA-924 54 SA-913
clg wt. 3					
	1/2" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—3/4" T&G plywd flr—10" I-shaped wd joist 24" o.c.—USG met fur chan 24" o.c. clip-att to joist—1" THERMAFIBER insul laid over chan below joists—panels screw att to chan 12" o.c.—joints fin—UL Des L530	47	40 54 43	TL-81-87—TL-81-16 Based on carpet & pad atop flooring—TL-81-17 Based on cushioned vinyl atop flooring—TL-81-19	SA-924 55
clg wt. 3					
plastered assemblies					
	1/2" IMPERIAL FIRECODE "C" gypsum base & veneer finish ceiling—2 x 10 wd joist 16" o.c.—1" nom wd sub & fin flr—base att with 5d nails 6" o.c.—1/16" veneer finish—joints taped—UL Des L512	N/A			SA-913 56
clg wt. 3					
	5/8" IMPERIAL FIRECODE gypsum base & veneer finish ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—base att with 6d nails 6" o.c.—1/16" veneer finish—joints taped—UL Des L501	N/A			SA-913 57
clg wt. 3					
	Resil 1/2" IMPERIAL FIRECODE "C" gypsum base & veneer finish ceiling—2 x 10 wd joist 16" o.c.—1" nom wd sub & fin flr—RC-1 chan spaced 16" o.c. and at end joints—base att with Type S screws 12" o.c.—1/16" veneer finish—joints taped—UL Des L514	N/A			SA-913 58
clg wt. 3					
	5/8" IMPERIAL FIRECODE gypsum base & veneer finish ceiling—Amer Plywood Assn 2-4 1/2" flr 4 x 10 wd joist 48" o.c.—USG met fur chan—base att with 1" Type S screws—1/16" veneer finish—joints taped—UL Des L508	N/A			SA-913 59
clg wt. 3					
noncombustible ceilings		gypsum drywall surfaces			
	5/8" SHEETROCK brand FIRECODE gypsum panels—1 1/2" cr chan 4' o.c.—USG met fur chan 24" o.c.—panels screw att 12" o.c.—joints fin—N/A	45		"Up and over" attenuation—suspension and ceiling membrane only—USG-5-FT-G&H	SA-923 60
clg wt. 3					

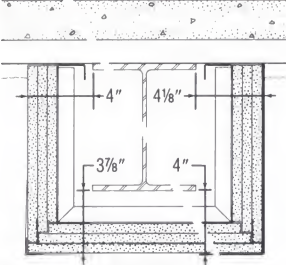
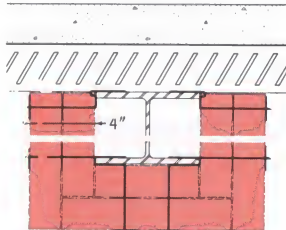
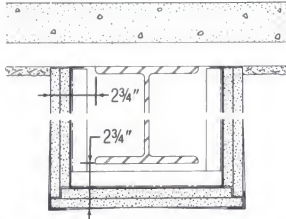
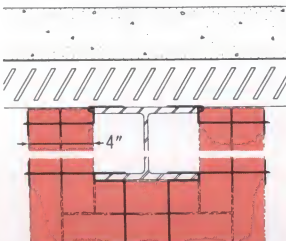
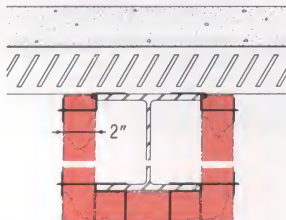
(See U.S.G. Technical Bulletin CS-6 Metal-Framed Metal Lath and Plaster Systems, for other fire-tested ceiling assemblies. Refer to U.S.G. Technical Folder SA-707 THERMAFIBER Fire Safety Systems, for safing insulation used with these systems.)

column type	physical data construction detail	description & test no.	comments	folder reference
column fireproofing				
4-hour rated applications				
W14 x228		Gypsum Drywall or Veneer Finish Fireprfg—2 layers 1/2" SHEETROCK brand FIRECODE "C" panels or 1/2" IMPERIAL FIRECODE "C" gypsum base around col— panels screw att to 158ST steel studs at corners—met corner beads—joints fin or 1/16" veneer finish over base— UL Des X507 (f)		SA-923 1
W14 x228		THERMAFIBER Mineral Fireprfg—2" fireprfg around col att with 1/8" stl wire studs welded to col 24" o.c.— UL Des X304 (f)	Dry assembly; offers excellent thermal insulation for exterior columns	SA-707 2
3-hour rated applications				
W14 x228		Gypsum Drywall or Veneer Finish Fireprfg— 1/2" SHEETROCK brand FIRECODE "C" panels or 1/2" IMPERIAL FIRECODE "C" gypsum base around col— double layer over ea web face—panels screw att to 158ST steel studs at col corners—met corner beads—joints fin or 1/16" veneer finish over base—UL Des X514 (f)		SA-923 3
W10 x49		Gypsum Drywall or Veneer Finish Fireprfg—3 layers 1/2" SHEETROCK brand FIRECODE "C" panels or 1/2" IMPERIAL FIRECODE "C" gypsum base around col— triple layer over ea flange end—inner layers on flange face separ by 158ST steel studs & screw att—met beads on corners—joints fin or 1/16" veneer finish over base—UL Des X515 (f)		SA-923 4
W10 x49		THERMAFIBER Mineral Fireprfg—dbl layer 2" fireprfg around col att with stud welding pins or 12-ga. flange clips & clinch shields 16" o.c.—UL Des X306 (f)	Dry assembly; offers excellent insulation for exterior columns	SA-707 5
2-hour rated applications				
W14 x228		Gypsum Drywall or Veneer Finish Fireprfg—1 layer 1/2" SHEETROCK brand FIRECODE "C" panels or 1/2" IMPERIAL FIRECODE "C" gypsum base around col— panels screw att to 158ST steel studs at col corners—met corner beads—joints fin or 1/16" veneer finish over base— UL Des X521 (f)		SA-923 6
W10 x49		Gypsum Drywall or Veneer Finish Fireprfg—2 layers 1/2" SHEETROCK brand FIRECODE "C" panels or 1/2" IMPERIAL FIRECODE "C" gypsum base around col— double layer over ea flange end—double layer on flange faces separ by 158ST steel studs & screw att—met beads on corners—joints or 1/16" veneer finish over base— UL Des X518 (f)		SA-923 7
Varies		Gypsum Drywall or Veneer Finish Fireprfg—3 layers 1/2" SHEETROCK brand FIRECODE "C" panels or 1/2" IMPERIAL FIRECODE "C" gypsum base around col— triple layer over ea flange end—inner layers on flange face separ by 158ST steel studs & screw att—met beads on corners—joints fin or 1/16" veneer finish over base— UL Des X524 (f)	Rating applies to tapered or constant section prefabricated metal building columns	SA-923 8
W10 x49		THERMAFIBER Mineral Fireprfg—2 1/2" fireprfg around col att with stud welding pins or 12-ga. flange clips & clinch shields 24" o.c.—UL Des X305 (f)	Dry assembly; offers excellent thermal insulation for exterior columns	SA-707 9

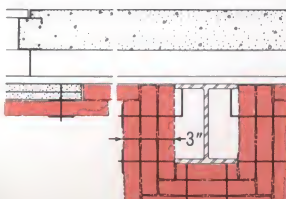
(For other tested fireproofing assemblies, see U.S.G. Technical Bulletin: CS-6 Metal-Framed Metal Lath and Plaster Systems)

fire rating	beam type	physical data construction detail	description & test no.	comments	folder reference
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beam fireproofing

3 hr. (beam only)	W8 X24		Gypsum Drywall or Veneer Finish Caged Beam Fireprfg—1 5/8" USG stl run chan brackets 24" o.c.—7/8 x 1 3/8" corner angles att to brackets—3 layers 5/8" SHEETROCK brand FIRECODE gypsum panels or IMPERIAL FIRECODE gypsum base att with Type S screws—1" 20-ga. hex mesh on bottom over middle layer—met beads on corners—joints fin or 1/16" veneer finish over base—2 1/2" conc deck on fluted stl flr—UL Des N505 (f)	Extends drywall and veneer finish use to beam protection. Fire rating for restrained assembly; 2-hr. rating for unrestrained assembly	SA-912 SA-923	10
3 hr.	W8 X24		THERMAFIBER Mineral Fireprfg—dbl layer 2" fireprfg around beam att with stud welding pins or 12-ga. flange clips & clinch shields 12" o.c.—2 1/2" conc deck on cellular stl flr—UL Des N304 (f)	Fire rating for restrained beam; unrestrained beam rating is 2 hr.	SA-707	11
2 hr. (beam only)	W8 X24		Gypsum Drywall or Veneer Finish Caged Beam Fireprfg—1 5/8" USG stl run chan brackets 24" o.c.—1 3/8 x 7/8" corner angles att to chan brackets—dbl layer 5/8" SHEETROCK brand FIRECODE gypsum panels or IMPERIAL FIRECODE gypsum base att with Type S screws—met beads on corners—joints fin or 1/16" veneer finish over base—2 1/2" conc deck on fluted stl flr—UL Des N501 (f)—UL Des N502 (f)	Design N502 based on 1 5/8" steel runner for corner angles & coped brackets	SA-912 SA-923	12
2 hr.	W8 X13		THERMAFIBER Mineral Fireprfg—dbl layer 2" fireprfg around beam att with stud welding pins or 12-ga. flange clips & clinch shields 16" o.c.—3 1/4" conc on fluted steel flr—UL Des D915 (f)	Fire rating is 1 1/2 hr. with cellular steel floor units	SA-707	13
2 hr.	W8 X12		THERMAFIBER Mineral Fireprfg—2" fireprfg around beam att with stud welding pins or 12-ga. flange clips & clinch shields 12" o.c.—2 1/2" conc on fluted stl flr—UL Des N304 (f)—UL Des N305 (f)	Fire rating is 1 1/2 hr. with cellular steel floor units	SA-707	14

trench header duct

3 hr.	W6 X12		THERMAFIBER Mineral Fireprfg—1" fireprfg, 8.25 pcf, under flr deck and trench header—dbl layer 1/2" SHEETROCK brand FIRECODE "C" gypsum panels under trench header—triple layer 3" fireprfg around beam—fireprfg and panels att with stud welding pins & clinch shields—2 1/2" conc on fluted stl flr—UL Des D301 (f)	Includes 4-hr. beam. Fire rating 2 hr. (beam 3-hr.) with 6.50-pcf min. fireprfg—UL Des D302	SA-707	15
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physical data
construction detail

description & test no.

comments

folder
reference

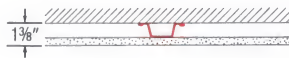

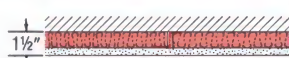



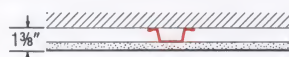
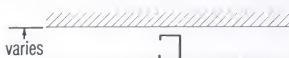
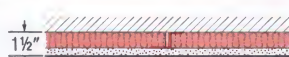
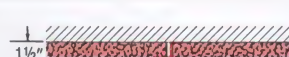

2-hour rated assemblies

	<p>Dbl layer $\frac{5}{8}$" FIRECODE gypsum sheathing exterior—USG 35SJ20 studs 24" o.c.—dbl layer $\frac{5}{8}$" SHEETROCK brand FIRECODE gypsum panel interior—base layer att with 1" Type S-12 screws 12" o.c.—face layer att. with $1\frac{1}{4}$" Type S-12 screws 12" o.c.—load bearing up to 80% allowable stud axial load—UL Des U425</p>		SA-510 1
	<p>Wd Stud—2 layers $\frac{5}{8}$" SHEETROCK brand FIRECODE gypsum panel interior—$\frac{1}{2}$" gypsum sheathing and 4" brick masonry veneer exterior—2 x 4 16" o.c.—sheathing appl horiz with 11d galv nails 6" o.c.—gypsum panels appl horiz or vert with nails 8" o.c.—joints stag & fin—UL Des U302</p>	<p>Rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish interior</p>	SA-924 2
	<p>USG Exterior Curtain Wall—USG 358CWS steel studs 16" o.c.—$\frac{1}{2}$" gypsum sheathing—self-furring metal lath—1" cement-lime-stucco exterior—3" THERMAFIBER M-S blankets betw studs—$\frac{5}{8}$" Foil-Back SHEETROCK brand FIRECODE "C" gypsum panels or IMPERIAL FIRECODE "C" gypsum base and $\frac{1}{16}$" veneer finish interior—T-4851-OSU (I)</p>	<p>Systems offer wide selection of exterior and interior surfaces, utilizing conventional materials (1)</p>	SA-805 3
	<p>USG Exterior Curtain Wall—1" USG liner panels set betw USG steel C-H studs 24" o.c. on exterior—2 layers SHEETROCK brand FIRECODE "C" gypsum panels screw att on interior—joints fin—U of C 4-2-75</p>	<p>Rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish interior</p>	SA-805 4

1-hour rated assemblies

	<p>$\frac{5}{8}$" FIRECODE gypsum sheathing exterior—USG 35SJ20 studs 24" o.c.—$\frac{5}{8}$" SHEETROCK brand FIRECODE gypsum panel interior—panels appl vert & att with 1" Type S-12 screws 12" o.c.—load bearing up to 100% allowable stud axial load—UL Des U425</p>		SA-510 5
	<p>USG 35SJ20 studs 24" o.c.—$\frac{1}{2}$" gypsum sheathing—1" FOAMULAR polystyrene insul installed horiz—$\frac{1}{2}$" cedar plywood exterior—3" THERMAFIBER M-S blkts betw studs—$\frac{5}{8}$" SHEETROCK brand FIRECODE "C" gypsum panel interior—joints fin—CEG 11-9-79</p>		SA-710 SA-805 6
	<p>Wd. Stud—$\frac{5}{8}$" SHEETROCK brand FIRECODE "C" gypsum panel interior—1" FOAMULAR polystyrene insul sheathing and $\frac{1}{2}$" plywd siding—2 x 4 16" o.c.—$\frac{3}{4}$" THERMAFIBER W-S blkts—sheathing appl horiz with $1\frac{1}{2}$" galv nails 12" o.c.—gypsum panels appl vert with 6d cem ctd nails 7" o.c.—joints fin—CEG 12-5-79—WHI-495-0379</p>		SA-710 SA-924 7
	<p>Wd Stud—$\frac{5}{8}$" SHEETROCK brand FIRECODE gypsum panel interior—$\frac{1}{2}$" gypsum sheathing and $\frac{3}{8}$" min shingle exterior—2 x 4 16" o.c.—3" glass fiber insul blkts—sheathing appl horiz with 6d nails 8" o.c.—gypsum panels appl vert with 6d nails 7" o.c.—joints fin—UL Des U014</p>	<p>Rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish interior surface</p>	SA-924 8

(1) For data on truss-type framing used with these systems, see U.S.G. Technical Bulletin PM-149 on "TRUSSTEEL Stud Curtain Wall Systems."

physical data construction detail	description	comments	folder reference
drywall assemblies			
	USG Metal Furring Channels 24" o.c., 1/2" Foil-Back SHEETROCK brand Gypsum Panels screw attached, U.S.G. Joint Treatment	Good vapor retarder; no limiting height	SA-923 1
	Wood furring strips 16" o.c., 1/2" Foil-Back SHEETROCK brand Gypsum Panels, U.S.G. Joint Treatment	Surface not isolated from structural stresses; good vapor retarder	SA-924 2
	USG Z-Furring Channels appl vert 24" o.c., 1" THERMAFIBER Z-Furring insulation betw chan, 1/2" Foil-Back SHEETROCK brand Gypsum Panels screw attached to channels, U.S.G. Joint Treatment	Suitable for up to 3" thick insulation; noncombustible; good vapor retarder; no limiting height	SA-923 3 SA-924
	USG Steel Studs 24" o.c., 1/2" Foil-Back SHEETROCK brand Gypsum Panels screw attached, U.S.G. Joint Treatment	Free standing for pipe chase clearance; good vapor retarder	SA-923 4
	USG Z-Furring Channels appl vert 24" o.c., FOAMULAR Extruded Polystyrene Insulation betw chan, 1/2" Foil-Back SHEETROCK brand Gypsum Panels appl vert and screw-attached to channels, U.S.G. Joint Treatment	Suitable for up to 3" thick insulation; no limiting height	SA-710 5 SA-923
	STL-369 Furring Spline appl vert 24" o.c., kerfed ULTRAWALL Gypsum Panels engage concealed spline	Provides exterior wall surfacing having same appearance as movable partitions	SA-1020 6
plastered assemblies			
	USG Metal Furring Channels 16" o.c., 1/2" Foil-Back IMPERIAL Gypsum Base screw-attached to channels, 1/16" veneer finish	Good vapor retarder; no limiting height	SA-912 7
	USG Steel Studs 16" o.c. set in runners, 1/2" Foil-Back IMPERIAL Gypsum Base screw-attached to studs, 1/16" veneer finish	Free-standing; allows for pipe chase clearance; good vapor retarder. Also suitable for ROCKLATH Base and conv. plaster interior	SA-912 8 SA-915
	USG Z-Furring Channels appl vert 24" o.c., THERMAFIBER Z-Furring Insulation betw chan, 1/2" Foil-Back IMPERIAL Gypsum Base screw-attached to channels, 1/16" veneer finish	Noncombustible; good vapor retarder; no limiting height. Also suitable for ROCKLATH Base and conv. plaster interior	SA-912 9 SA-915
	USG Z-Furring Channels appl vert 24" o.c., FOAMULAR Extruded Polystyrene Insulation betw chan, 1/2" Foil-Back IMPERIAL Gypsum Base screw-attached to channels, 1/16" veneer finish	Suitable for up to 3" thick insulation, no limiting height. Also suitable for ROCKLATH Base and conv. plaster interior	SA-710 10 SA-912 SA-915
	TRUSSTEEL Studs 16" o.c. cross braced 4' o.c. on back chord, 3/8" Foil-Backed ROCKLATH Plaster Base attached with TL-1 Clips, 1/2" sanded basecoat plaster, 1/16" lime putty finish	Free standing; allows for pipe chase clearance; good vapor retarder	SA-915 11

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